

GulfSea Hydraulic HVI Plus 100

Gulf Marine Pte. Ltd.

Chemwatch: **5612-52** Version No: **4.1** Safety Data Sheet Issue Date: **11/09/2023** Print Date: **14/06/2024** S.GHS.SGP.EN.E

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	GulfSea Hydraulic HVI Plus 100
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	2MH51000-00

Relevant identified uses of the substance or mixture and uses advised against

uses	Hydraulic oil
	Use according to manufacturer's directions.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Gulf Marine Pte. Ltd.
Address	37 Tuas Road 638503 Singapore
Telephone	+65 6592 0120
Fax	Not Available
Website	Not Available
Email	sds@gulf-marine.com

Emergency telephone number

Relevant identified

Association / Organisation	Gulf Marine Pte. Ltd.
Emergency telephone numbers	+65 6592 0120
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Not Applicable
Not Applicable
Not Applicable

Precautionary statement(s) Prevention Not Applicable

Precautionary statement(s) Response Not Applicable

Precautionary statement(s) Storage

Not Applicable

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Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

	Name	
Not Available NotSpec	proprietary in	gredients

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: • Wash out immediately with water. • If irritation continues, seek medical attention. • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

Foam.

- Dry chemical powder.
 BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
vice for firefighters	
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	 Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). May emit acrid smoke. Mists containing combustible materials may be explosive. Combustion products include: carbon dioxide (CO2) sulfur oxides (SOx) other pyrolysis products typical of burning organic material.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
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Major Spills	 Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.
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Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling		
Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. 	
Other information	 Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS. 	

Conditions for safe storage, including any incompatibilities

Suitable container	 Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Avoid contamination of water, foodstuffs, feed or seed. ► Avoid reaction with oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL) INGREDIENT DATA Not Available Emergency Limits Ingredient TEEL-1 TEEL-2 TEEL-3 GulfSea Hydraulic HVI Plus Not Available Not Available Not Available 100 Ingredient Original IDLH Revised IDLH GulfSea Hydraulic HVI Plus Not Available Not Available 100

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. can be highly effective in protecting workers and will typically be independent of worker interactions to pr The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air co design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage are	ovide this high level of protection. worker and ventilation that ntaminant if designed properly. The approved respirator. Correct fit is as. Air contaminants generated in
	the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of free effectively remove the contaminant.	esh circulating air required to
	Type of Contaminant:	Air Speed:

0.25-0.5 m/s (50-100 f/min)

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solvent, vapours, degreasing etc., evaporating from tank (in still air)

			100 f/min)
	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)		0.5-1 m/s (100- 200 f/min.)
	direct spray, spray painting in shallow booths, drum filling, generation into zone of rapid air motion)		1-2.5 m/s (200- 500 f/min)
	grinding, abrasive blasting, tumbling, high speed wheel ge of very high rapid air motion).	nerated dusts (released at high initial velocity into zone	2.5-10 m/s (500- 2000 f/min.)
	Within each range the appropriate value depends on:		
	Lower end of the range	Upper end of the range	
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents	
	2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity	
	3: Intermittent, low production.	3: High production, heavy use	
	4: Large hood or large air mass in motion	4: Small hood - local control only	
Individual protection	Simple theory shows that air velocity falls rapidly with distance decreases with the square of distance from the extraction po adjusted, accordingly, after reference to distance from the co a minimum of 1-2 m/s (200-400 f/min.) for extraction of solve mechanical considerations, producing performance deficits w multiplied by factors of 10 or more when extraction systems a	int (in simple cases). Therefore the air speed at the extrac ntaminating source. The air velocity at the extraction fan, nts generated in a tank 2 meters distant from the extraction vithin the extraction apparatus, make it essential that theo	ction point should be for example, should be on point. Other
measures, such as personal protective equipment			
Eye and face protection	lens absorption and adsorption for the class of chemicals should be trained in their removal and suitable equipmer irrigation immediately and remove contact lens as soon a	hould be created for each workplace or task. This should s in use and an account of injury experience. Medical and tt should be readily available. In the event of chemical exp as practicable. Lens should be removed at the first signs at only after workers have washed hands thoroughly. [CD0	include a review of first-aid personnel posure, begin eye of eye redness or
Skin protection	See Hand protection below		
Hands/feet protection	The selection of suitable gloves does not only depend on the manufacturer. Where the chemical is a preparation of severa advance and has therefore to be checked prior to the applicat The exact break through time for substances has to be obtain when making a final choice. Personal hygiene is a key element of effective hand care. Gli washed and dried thoroughly. Application of a non-perfumed Suitability and durability of glove type is dependent on usage frequency and duration of contact, chemical resistance of glove material, glove thickness and dexterity Select gloves tested to a relevant standard (e.g. Europe EN When prolonged or frequently repeated contact may occur, 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended by the nonly brief contact is expected, a glove with a protective EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended in ASTM F-739-96 in any application, gloves are it excellent when breakthrough time > 480 min Good when breakthrough time > 20 min Poor when glove material degrades For general applications, gloves with a thickness typically great when breakthrough time < 20 min to the source of the glove with a breakthrough time < 10 min to the source of the glove material degrades for general application of the task requirements and knot Glove thickness may also vary depending on the glove manutechnical data should always be taken into account to emsure when it is beyond the task requirements and knot Glove thickness may also vary depending on the glove manutechnical data should always be taken into account to emsure the source optimal of the ashould always be required when only likely to give short duration protection and would normal only likely to give short duration protection and would normal only likely to give short duration protection and would normal to thickness must only be worn on clean hands. After using gloves is not necessare and the source gloves in a manufacture potential duration protection and would normal to manute only likely	I substances, the resistance of the glove material can not titon. ned from the manufacturer of the protective gloves and have poves must only be worn on clean hands. After using glove moisturiser is recommended. . Important factors in the selection of gloves include: 374, US F739, AS/NZS 2161.1 or national equivalent). a glove with a protection class of 5 or higher (breakthroug onal equivalent) is recommended. on class of 3 or higher (breakthrough time greater than 60 nended. and this should be taken into account when considering g rated as: eater than 0.35 mm, are recommended. fily a good predictor of glove resistance to a specific chern xact composition of the glove material. Therefore, glove s wledge of breakthrough times. facturer, the glove type and the glove model. Therefore, to a selection of the most appropriate glove for the task. rarying thickness may be required for specific tasks. For effore there a high degree of manual dexterity is needed. Howen ly be just for single use applications, then disposed of. e there is a mechanical (as well as a chemical) risk i.e. where there is a mechanical (as well as a chemical) risk i.e. where	be calculated in as to be observed as, hands should be gh time greater than or minutes according to loves for long-term hical, as the selection should also he manufacturers xample: /er, these gloves are here there is abrasion
	moisturiser is recommended.		
Body protection	See Other protection below		
	No special equipment needed when handling small quantitie		

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Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+			Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

• Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.

- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear to yellow colored oily liquid with a characteristic odor; does not mix with water. Yellow		
Physical state	Liquid	Relative density (Water = 1)	~ 0.87
Odour	Characteristic	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	>300
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	>300
Melting point / freezing point (°C)	- 27°C (pour point)	Viscosity (cSt)	98.6, 13.4 (100°C)
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	242 (OC, ASTM D92)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	<0.01 (20°C)	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

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Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.		
ulfSea Hydraulic HVI Plus	TOXICITY IRRITATION		
100	Not Available Not Available		
Legend:	 Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value of specified data extracted from RTECS - Register of Toxic Effect of chemical Substances 		
Legend: Acute Toxicity			
	specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	1	
Acute Toxicity	specified data extracted from RTECS - Register of Toxic Effect of chemical Substances X Carcinogenicity	×	
Acute Toxicity Skin Irritation/Corrosion Serious Eye	specified data extracted from RTECS - Register of Toxic Effect of chemical Substances X Carcinogenicity X Reproductivity	× ×	

Data either not available or does not fill the criteria for classification
 Data available to make classification

SECTION 12 Ecological information

OukOas Understär UV/I Diss	Endpoint	Test Duration (hr)	Species	Value	Source
GulfSea Hydraulic HVI Plus 100	Not Available	Not Available	Not Available	Not Available	Not Availabl
Legend:	Ecotox databa		ECHA Registered Substances - Ecotoxicologica OC Aquatic Hazard Assessment Data 6. NITE (J		

DO NOT discharge into sewer or waterways.

Persistence and degradability		
Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients
Bioaccumulative potential		
Ingredient	Bioaccumulation	
	No Data available for all ingredients	
Mobility in soil		
Ingredient	Mobility	
	No Data available for all ingredients	

SECTION 13 Disposal considerations

Waste treatment methods	
Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: • Reduction • Reuse • Recycling • Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. • DO NOT allow wash water from cleaning or process equipment to enter drains. • It may be necessary to collect all wash water for treatment before disposal. • In all cases disposal to sever may be subject to local laws and regulations and these should be considered first. • Where in doubt contact the responsible authority. • Recycle wherever possible or consult manufacturer for recycling options. • Consult State Land Waste Authority for disposal. • Bury or incinerate residue at an approved site. • Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required

Marine Pollutant NO

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Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
14.7.3. Transport in bulk in acc	cordance with the IGC Code
Product name	Ship Type

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	Not Available
Canada - DSL	Not Available
Canada - NDSL	Not Available
China - IECSC	Not Available
Europe - EINEC / ELINCS / NLP	Not Available
Japan - ENCS	Not Available
Korea - KECI	Not Available
New Zealand - NZIoC	Not Available
Philippines - PICCS	Not Available
USA - TSCA	Not Available
Taiwan - TCSI	Not Available
Mexico - INSQ	Not Available
Vietnam - NCI	Not Available
Russia - FBEPH	Not Available
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	11/09/2023
Initial Date	26/06/2023

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chernwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication and may be subject to modification from time to time. It is the user's responsibility to verify that this Safety Data Sheet is current prior to use or application. The information given is designed only as a guidance for safe handling, use, application, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.